

A COLLECTION OF SEVENTEENTH-CENTURY DRAWINGS

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IN 'The Auk' for July 1925, Dr. John C. Phillips described a manuscript by Leonhard Baldner. Dr. Phillips pointed out that this manuscript was part of a larger collection of drawings of birds, fishes, insects, and other animals, but he was unable then to trace the history of the collection. When the collection came into my hands five years ago, I was interested to find that many of the drawings bore names or notes in English in a seventeenth-century hand. It seemed to me that it might be possible to trace the original owner through these notes and, although the evidence is largely circumstantial and perhaps inadmissible in a court of law, I believe that sufficient basis has been found to go before a grand jury.

For the time being I shall not consider Baldner's manuscript, partly because Dr. Phillips discussed it rather fully and partly because of other circumstances which will become apparent later. If we eliminate this manuscript, we have left a collection of about 350 seventeenth-century drawings. Most of these drawings are of birds and fishes. A number are of insects and a few are of mammals, amphibians, and other animals. As one examines these drawings, a number of facts appear.

1. The collection was carefully assembled and studied by a seventeenth-century Englishman. It is not a haphazard collection nor one put together at a later date.

2. Most of the drawings are in water color, highly finished, with legends in English, Latin, German, or French. They vary greatly in merit, but the best are very fine indeed. They are patently the work of several different artists.

3. A few of the drawings are rough sketches in ink, pencil, or sanguine. Most of these have data as to place of collection, etc., in English. These are exactly the kind of sketch that a naturalist makes for his own information and that only a working naturalist would bother to preserve.

4. Among the localities mentioned are Augsburg, Antwerp, Dunkirk, Brussels, Amsterdam, Middleburgh, London, "in ye Danau," "in ye Rheno," and "on the way from Florence to Siena."

5. Most of the drawings are named with reference to writers of the sixteenth and early seventeenth centuries. Among these are Belon, Aldrovandi, Piso, Marcgraf, Nieremberg, Bontius, Clusius, and, for the fishes, Rondelet, Salviani, and Nieuhoff.

6. One drawing has the specific notation, "Picturam transmisit Th: Brown, M.D."

When we put these facts together we have a fairly accurate description of the man who formed this collection. He was an Englishman; an active naturalist in the latter half of the seventeenth century; particularly interested in birds, fishes, and insects; well acquainted with earlier writers on natural history; widely traveled on the Continent; and a correspondent of Thomas Brown, M.D. It would be interesting to know that he had a copy of Baldner's manuscript.

The only naturalists who seem to fit these specifications are Francis Willughby and John Ray. In the preface to Willughby's 'Ornithology,' Ray gives an almost perfect description of the present collection. For convenience I quote his English translation of 1678.

"Now because elegant and accurate Figures do much illustrate and facilitate the understanding of Descriptions, in order to the Engraving such Figures for this Work, Mr. Willughby made a Collection of as many Pictures drawn in colours by the life as he could procure. First, He purchased of one Leonard Baltner, a Fisherman of Strasburgh, a Volume containing the pictures of all the Water-Fowl frequenting the Rhene near that City, as also all the Fish and Water-Insects found there, drawn with great curiosity and exactness by an excellent hand. . . . Secondly, At Nurenberg in Germany he bought a large Volume of Pictures of Birds drawn in colours. Thirdly, He caused divers Species, as well seen in England as beyond the Seas, to be drawn by good Artists. Besides what he left, the deservedly famous Sir Thomas Brown, Professor of Physick in the City of Norwich, frankly communicated the Draughts of several rare Birds, with some brief notes and descriptions of them. Out of these, and the Printed Figures of Aldrovandus, and Pet. Olina, an Italian Author, we culled out those we thought most natural and resembling the life, for the Gravers to imitate, adding also all but one or two of Marggravius's, and some out of Clusius his Exotics, Piso his Natural History of the West Indies, and Bontius his of the East."

Ray explains later in the preface that he had difficulties with his engravers and that he was not entirely satisfied with his plates, but a quick check shows that the sources of most of his plates can be determined. Between thirty-five and forty (or about ten per cent) of the 355 figures of birds in the 'Ornithology' seem to have been taken from paintings in the present collection. In some cases the print is in reverse, as might be expected, but the resemblance is so obvious that there seems to be no reason to doubt that the drawing

is the source of the engraving. A far larger proportion of the plates in 'De Historia Piscium' by the same authors (Oxford, 1686) are from drawings in this collection.

Certain other facts stand out. Every locality mentioned on the drawings was visited by Willughby and Ray in their travels on the Continent in 1663-1666. As nearly as I can determine, every bird and fish represented in the collection is described in the published works of these two authors. It is difficult to come to any other conclusion than that the collection is one assembled by Francis Willughby and used by John Ray as a source of the "elegant and accurate Figures" that adorn their works.

Interesting confirmation comes from the drawing referred to above that was sent by Thomas Brown. It is a rather crude sketch of a hen's egg with the figure of a bird on it. In Ray's account of his travels on the Continent ('Observations topographical, moral, & physiological; made in a journey through parts of the Low-Countries, Germany, Italy, and France,' etc., London, p. 237, 1673), he mentions this picture:

"Among other things we took notice of . . . a hens egg having on one side the signature of the Sun, which I rather noted, because some years before Sir Thomas Brown of Norwich sent me the picture of one having the perfect signature of a Duck swimming upon it, which he assured me was natural."

The works of Willughby and Ray are the earliest important English writings on birds and fishes. Linnaeus cites them repeatedly as authorities for his descriptions and since none of the actual specimens which they collected is extant, these drawings have very nearly the status of types. It is probable that some of the sketches are by John Ray and that the legends on the drawings are in his hand, but this would be a matter for a handwriting expert to determine.

This would all seem very simple and conclusive except for the *presence* of the Baldner manuscript. We know that Willughby had a copy of this manuscript, because Ray tells us so, but that copy is in the British Museum. As Dr. Phillips pointed out in his article, it bears the same date as the present one (1653), while every other known copy is dated 1666, and it is accompanied by a translation by Slare. Ray refers to Slare's translation in the preface to 'De Historia Piscium.' The manuscript in the British Museum, too, has some notes in Ray's hand.

Two possible explanations occur to me. Willughby might have bought two copies of Baldner's manuscript, although Ray mentions

but one; or Baldner may have presented a second copy to Ray. Baldner does not seem to have had any connections with the other naturalists of his time and the meeting with Willughby must have been an important event in his life. The fact that both copies bear identical dates suggests a connection between them. The Museum copy has two pictures to a page, while the present copy has but one in all but a few instances. My copy, too, has a portrait of Baldner. Without making more direct comparisons than I have been able to make, it is impossible to reach a direct conclusion, but it seems to me that the Museum copy might have been a 'working copy' which Ray used. In any event, this collection of pictures, with the Baldner manuscript in the British Museum and the 'Nuremberg' volume, which Ray mentions in the preface to the 'Ornithology' quoted above, seems to be the principal original source used by the outstanding English naturalists of the seventeenth century. J. H. Gurney, in his 'Early Annals of Ornithology' (London, p. 211, 1921) reports that the Nuremberg volume is still in the possession of Willughby's descendents.

Two minor matters remain. In tracing the history of the collection, Dr. Phillips mentioned that it had remained for at least 150 years in the family of an English peer whose name he had been unable to learn. Further inquiries on my part proved unproductive, but it may be well to place on record the fact that underneath the obviously recent end-papers I found the bookplate of the Earl of Dartmouth.

In his article, Dr. Phillips referred to the present copy as the "Tollman copy." He, like the English dealer from whom he bought the volumes, misread the name. The translator of the Baldner manuscript was Philip Henry Zollman, who seems to have been a publisher in London. He was a Fellow of the Royal Society and the first to hold its office of Secretary for Foreign Correspondence. In those days that post was no sinecure, for the society was in active communication with scientists on the Continent and in America, and Zollman was kept busy translating the great masses of abstruse scientific matter that came in. He held the position until his death in 1748. His own contributions to 'Philosophical Transactions' were few and in the field of physics. Whether Zollman actually owned this copy or whether he merely translated it for its owner is not known, nor is it of particular moment.

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